



# CDC UNIFIED PROCESS PROCESS GUIDE



## EARNED VALUE MANAGEMENT

As of October 01, 2010 practices, templates, and processes were version frozen. The contents of this document may be obsolete. It remains available as reference but should not be relied upon as current or accurate.

If you have questions or require additional information  
please contact the CDC Unified Process.

<http://www2.cdc.gov/cdcup/library/other/contact.htm>

### Purpose of the Process Guide

CDC projects are required to comply with various CDC and Federal regulations, mandates, policies, processes, and standards. Information about these requirements is available from various websites and supporting documents. However, this information is often not presented from the perspective of the project team and their roles & responsibilities in complying with these requirements. CDC UP Process Guides provide that perspective.

CDC UP Process Guides help project teams comply with CDC and Federal requirements by:

1. Setting the requirements in the context of their purpose
2. Providing step-by-step instructions for completing the activities required for compliance
3. Illustrating potential integration points between processes
4. Presenting requirements in a concise, easy-to-understand, and consistent format
5. Making that presentation accessible to the CDC community via the CDC Unified Process website

The specific purpose of this Process Guide is to describe the **Earned Value Management** process as it applies to project teams.

### Process Overview

This process identifies and defines the responsibilities of the IT investment stakeholders in the EVM process. Also, it established the EVM Process, including its inputs and outputs, and their governing controls and methodologies.

As required by the Office of Management and Budget (OMB), CDC investments will use EVM to monitor their cost, schedule, and performance. The CDC Office of the Chief Information Officer (OCIO) is ensuring that all investments use an appropriate level of EVM as a management tool.

EVM provides Government investment managers and contractors with accurate data from which to make responsible management decisions. EVM minimizes risk by effectively integrating the investment scope of work with cost, schedule, and performance elements for optimum project planning and control. Earned Value Management provides a quantitative measure of project management progress as measured against a performance baseline established from a project's work breakdown structure and project plan. Earned value (EV) data is a critical component of the Control phase of the Capital Planning and Investment Control (CPIC) process, because it provides investment managers with the cost, schedule, and performance data necessary to ensure that CDC investments are delivered on time and perform within budget and scope.

The CPIC process includes monthly EVM reporting for Development, Modernization, and Enhancement (DME) IT investments. Also, an OMB-approved three-tiered approach for EVM was instituted by HHS to incorporate stronger EVM application in project management processes.

The CDC Capital Planning and Investment Control Office, ensures that the appropriate rigor for EVM is fully integrated into the CPIC process, and that the Major, Tactical and Supporting investments accurately capture the necessary EVM data. The CDC Capital Planning and Investment Control Office works in conjunction with the Investment Managers to ensure that required EVM processes are implemented for IT



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development projects and programs, the EVM information is used effectively in HHS and OPDIV CPIC processes, and EVM results and reports are provided to HHS in an appropriate and timely manner.

The Investment Manager and the contractor each have critical roles to play in EVM. The major activities and roles in performing EVM are performed either before the contract is awarded (pre-award) or after the contract is executed (post-award).

### Process Attributes

This section provides a list of process attributes to help project teams better understand the requirements necessary to comply with this process and to determine when and how they may impact their project.

PROCESS ATTRIBUTE	DESCRIPTION
<b>Process Owner(s)</b>	The CPIC team located in the Office of the Chief Operating Officer (OCOO).
<b>Process Criteria</b>	All IT Investments
<b>Timing of Process in Project Life Cycle</b>	Planning Phase of an IT Project
<b>Estimated Level of Effort</b>	Monthly EVM Reports (4 to 8 hours)
<b>Associated Costs</b>	No cost to project
<b>Process Prerequisites</b>	None
<b>Process Dependencies</b>	None
<b>Related Systems/Tools</b>	ANSI EIA 748 Intent Guide; Program Managers' Guide to the Integrated Baseline Review Process; and Surveillance Guide <a href="http://intranet.cdc.gov/cpic/EarnedValue.htm">http://intranet.cdc.gov/cpic/EarnedValue.htm</a>
<b>Available Training</b>	The Federal Acquisition Institute (co-located with the Defense Acquisition University (DAU), CDC University
<b>Additional Information</b>	<a href="#">HHS Earned Value Policy and Procedures</a> <a href="http://intranet.cdc.gov/cpic/">http://intranet.cdc.gov/cpic/</a> <a href="#">CDC CPIC Policy</a>

### Contact List

This section provides a list of individuals and/or offices that are available to assist project team in answering questions regarding the content of this Process Guide and related topics. The information is correct as of this publication. However, due to the ever-changing nature of our work environment it is possible some information may be out of date.

NATIONAL CENTER	ROLE	NAME
National Center for Birth Defects and Developmental Disabilities (NCBDDD)	Point of contact	Andy Autry and Kenneth Demons
National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP)	Point of contact	Mike Coss and Cindy Allen
National Office of Health Genomics (NOPHG)	Point of contact	Mike Coss and Cindy Allen
National Center for Environmental Health (NCEH)	Point of contact	Monty Howie and Ken Long
National Center for Injury Prevention and Control (NCIPC)	Point of contact	Robin Forbes and Mark A. Davis
Agency for Toxic Substances and Disease Registry (ATSDR)	Point of contact	Monty Howie and Ken Long



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NATIONAL CENTER	ROLE	NAME
National Center for Health Statistics (NCHS)	Point of contact	Linda Torian
National Center for Public Health Informatics (NCPHI)	Point of contact	Kimberly Hinton
National Institute for Occupational Safety and Health (NIOSH)	Point of contact	Ed Dacey
Coordinating Office for Terrorism Preparation and Emergency Response (COTPER)	Point of contact	Kevin Lyday
Coordinating Center for Infectious Diseases (CCID) Overall Portfolio	Point of contact	Khan, Agha (Nabeel) and Wanda Hall
National Center for HIV/AIDS, Viral Hepatitis, STD & TB Prevention (NCHHSTP)	Point of contact	Joe Nay
National Center for Immunization and Respiratory Diseases (NCIRD)	Point of contact	Karron Singleton
National Center for Zoonotic, Vector-Borne & Enteric Diseases (NCZVED)	Point of contact	Bob Fish
National Center for Preparation, Detection & Control of Infectious Diseases (NCPDCID)	Point of contact	James Tolson
OD/ OCOO Financial Management Office (FMO)	Point of contact	Shelli Smalling and Daniel J. Hardee
OD/ OCOO Information Technology Services Office (ITSO)	Point of contact	Rodney Murray
OD/ OCOO Management Analysis Services Office (MASO)	Point of contact	Tim Day
OD/ OCOO Management Information Systems Office (MISO)	Point of contact	Sandra Chapman and Allison Dural
OD/ OCOO Procurement and Grants Office (PGO)	Point of contact	Jamie Legier and Terrence Perry
OD/ OCOO Office of Chief Information Security Officer (OCISO)	Point of contact	Kerey Carter
OD/ OCOO Building and Facilities Office (BFO)	Point of contact	Stanley Davis
OD/ OCOO Capital Planning and Investment Control (CPIC)	Process Owner	Sandra McGill

## Key Terms

The CDC Unified Process Team maintains a comprehensive list of key terms and acronyms relevant to all Unified Process artifacts maintained on the CDC UP website. Follow the link below for definitions and acronyms related to this, and other, document.

<http://www2.cdc.gov/cdcup/library/other/help.htm>

TERM	DEFINITION
CAP	Corrective Action Plans (CAP) are documents that allow Investment Managers to define the strategy that will be employed to improve the performance of their investments.
CPIC	Capital Planning and Investment Control
CPR	Contract Performance Report (CPR) presents the cost and schedule data for the current period as well as in a cumulative format. Formats 1 and 5 provide the IT Investment Manager the insight needed to manage the investment.
EVM	Earned Value Management (EVM) is a methodology that integrates a program's work scope, schedule, and resources to enable government and



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TERM	DEFINITION
	contractor management to objectively track program progress throughout the project's life cycle. Please refer to the ANSI/EIA Standard 748-A for additional information.
EVMS	Earned Value Management System (EVMS) is the integrated set of processes, applications, and practices that follow the guidelines in the ANSI/EIA Standard 748-98. The guidelines describe the attributes of an effectively integrated cost, schedule, and technical performance management system.
IBR	Integrated Baseline Review (IBR) is intended to verify the technical content and realism of the related performance budgets, resources, and schedules. It should provide a mutual understanding of the inherent risks in the offerors'/contractors' performance plans and the underlying management control systems, and it should formulate a plan to handle these risks.
IMS	Integrated Master Schedule (IMS) is developed for the IT investment so that tasks and milestones are clearly defined. It is updated regularly to identify IT investments elements that are behind as well as those ahead of schedule. The IMS maps directly to the CWBS enabling the investment management team a single point of reference for all activities.
Investment Owner/ Manager	The Investment Owner is the person in management, often a Branch Chief or someone they have designated, who is responsible for the project in its entirety. The Investment Owner is also responsible for keeping the project ProSightdata up to date, including ensuring that the correct project team members are listed and that they are aware of and have accepted their roles.
IT investment	Any expenditure that is applied toward information technology.
NC/ CC/ CO	CDC National Centers, Coordinating Centers, and Coordinating Offices
Major, Tactical and Supporting	<p><b>Major investment</b> - IT investments that have the following characteristics: (a) total planned outlays (i.e., DME and SS) of \$10 million or more in the budget year; (b) are for financial management and obligate more than \$500,000 annually; (c) are otherwise designated by the HHS CIO as critical to the mission or to the administration of HHS programs, finances, property, or other resources; and (d) have life cycle costs exceeding \$50 million.</p> <p><b>Tactical investment</b> - IT investments that have not been designated as major IT investments and have planned total outlays (i.e., DME and SS) of \$3 million or more in the budget year and are otherwise designated by the HHS CIO as significant to the HHS mission or to the administration of CDC programs, finances, property or other resources</p> <p><b>Supporting investment</b> - IT investments not otherwise designated as major or tactical that have planned total outlays (i.e., DME and SS) of less than \$3 million in the budget year and have been designated by the HHS CIO as supporting IT investments</p>
Tier 1	IT investments that have current- year DME funding equal to or greater than \$10 million. Those investments must apply EVM in full compliance with ANSI/EIA Standard 748-A-1998 in any investments supporting the DME effort.
Tier 2	IT investments that have current-year DME funding equal to or great than \$1 million and less than \$10 million. Those investments must apply EVM principals for tracking investment cost, schedule, and performance but need only comply with a subset of ANSI-EIA Standard 748-A-1998 criteria in any investments supporting the DME effort.
Tier 3	IT investments that have current-year DME funding less than \$1 million. Those investments must apply EVM principals for tracking investment cost, schedule, and performance, but are not required to meet ANSI-EIA Standard 748-A-1998 criteria. The appropriate EVM approach for each Tier 3 investment will be



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TERM	DEFINITION
	determined by the dollar amount and complexity of the affected investment.



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### EVM Requirements Based on Tier

EVM REQUIREMENTS	TIER 1	TIER 2	TIER 3
Contract Performance Report	R	R	O
Integrated Master Schedule	R	T	T
Integrated Baseline Review	R	O	O
EVM System Compliance	R	R	O
EVM System Certification	R	O	O

R = Required, T = Tailored (requirement may be tailored by investment), O = Optional

### Contractor EVM Requirements Based on Tier

EVM REQUIREMENTS	TIER 1	TIER 2	TIER 3
CPR Format 1 – WBS	R	R	T
CPR Format 2 – Organizational Categories	R	O	O
CPR Format 3 – Baseline	R	O	O
CPR Format 4 – Staffing	R	O	O
CPR Format 5 – Explanation and Problem Analyses	R	R	T
Contract Funds Status Report	R	R	O

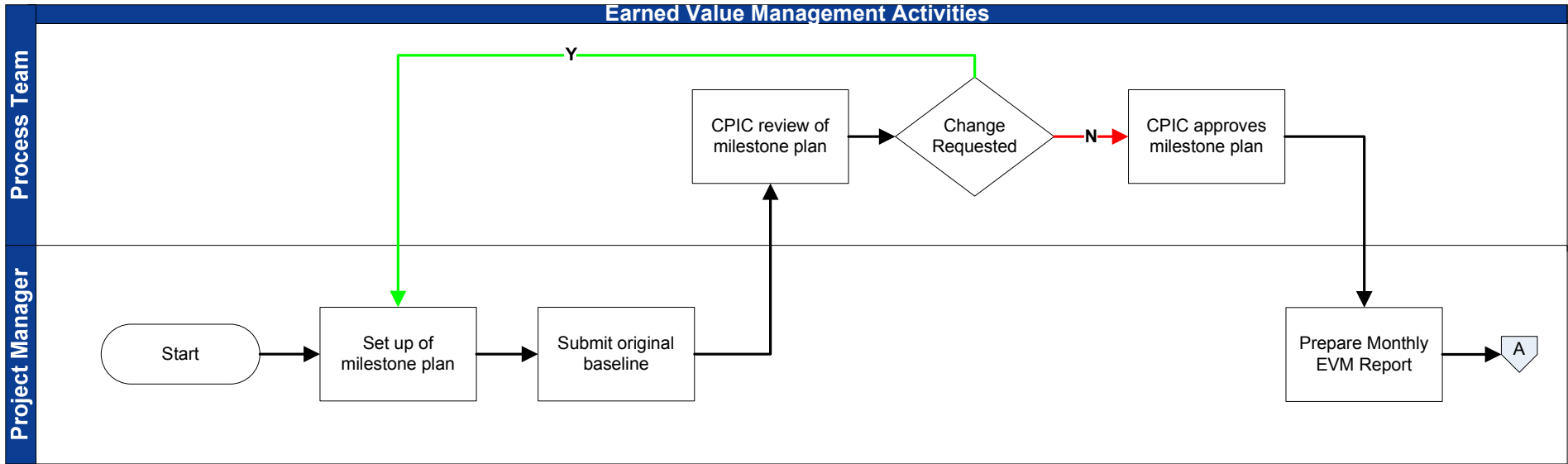
### EVM Functionality in ProSight

This section provides a list of steps outlining the requirements for capturing EVM data in ProSight.

ACTIVITY		DESCRIPTION
1.	Plan Setup (Original/Baseline Change Request) 1a. Proposed cost and planned start and end dates	The starting point for EVM users, this form supports data gathering to set up the original baseline as well as any future rebaselines.
2.	Original Milestone Plan	Provides a read-only view of the original milestone plan for the investment.
3.	Current Plan	Provides a read-only view of the externally approved milestone plan as well as the contractor and government cost detail tables.
4.	Acquisition/EVM Contract Compliance	Includes all the data regarding contracts and task orders that is required by OMB. This data is submitted to OMB via the Exhibit 300 (for Major and Tactical Investments).
5.	Tracking Actuals / Analysis	As the investment execution begins and actual costs are calculated they should be entered and analyzed in this form. EVM reporting is required monthly for investments with DME costs.
6.	Corrective Action Plan/Baseline Change Request Uploads	Provides the ability to upload MS Word documents regarding <ul style="list-style-type: none"><li>• Corrective Action Plan (CAP) data pertaining to investments cost and schedule variance of +/-5%</li><li>• Baseline Change Request (BCRs)</li></ul>

**Process Flowchart**

This section provides a pictorial view of steps outlining the activities associated with complying with this process and who usually performs those activities.





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